Rose Intarsia Jewelry Box

The salvaged Lake Superior birch used for this box was probably a young sapling when Italy's fine craftsmen were introducing intarsia to the world.

By Joseph Szabo

Intarsia

is a mosaic or sculpture wherein each piece of a pattern is cut separately, shaped and then glued in place.

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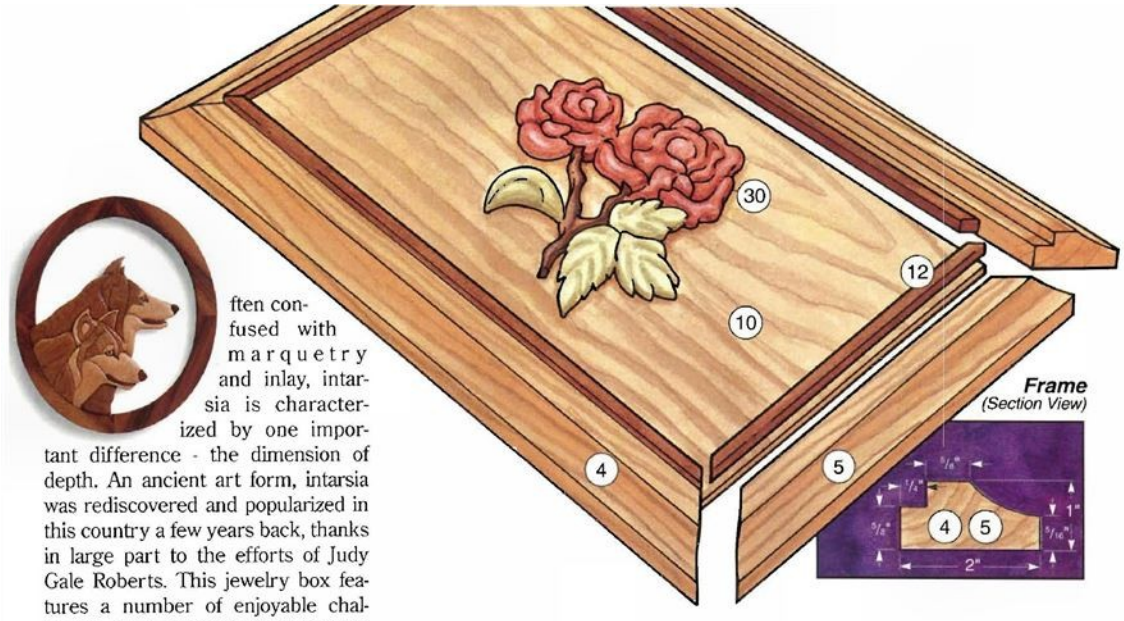

often confused with marquetry and inlay, intarsia is characterized by one important difference - the dimension of depth. An ancient art form, intarsia was rediscovered and popularized in this country a few years back, thanks in large part to the efforts of Judy Gale Roberts. This jewelry box features a number of enjoyable challenges, from building small drawers and secret compartments to creating the intarsia rose on the lid. Such a special project deserves the best materials: to build the carcass, I used 300-year-old flame birch recovered from the depths of Lake Superior. But any distinct, light-colored, fine hardwood will do nicely. To get just the right colors for the rose, I used cocobolo, walnut and green poplar. The rich tones of cocobolo are also picked up in the box's trim.

Start with the Case

Dimensions for all the parts in this project are listed in the Material Lists. I cut the carcass front, back and sides (pieces 1 and 2) from a single board to preserve the grain pattern around the box. The inevitable mismatched joint (where the two ends of the board meet) is at one of the back corners.

The sides are joined to the ends with a simple joint comprised of matching rabbets (see **Pinup Shop Drawings** between pages 34 and 35). Use the dimensions in the shop drawings to lay out these cuts, then make the cuts on your table saw with a sharp dado head. Massage the cuts so the ends of the front and back protrude very slightly past the sides: your final sanding will then help seal the exposed end grain.

Drawer Openings

There are two small, hidden drawers in the bottom of the jewelry box. The fronts of these drawers (pieces 3) are cut from the sides, leaving behind two openings. Lay out these openings carefully (see **Pinup Shop Drawings**), as a mistake will ruin the side and put an end to the continuous grain pattern running around the carcass. Before making the cuts on your scroll saw, it's a good idea to drill fine pinholes at the corners to help the blade make the turns (See **Figure 1**). After cutting the drawer faces out, square the opening with a file and sand the drawer front edges true.

You can now glue and clamp the carcass, measuring for squareness in all three dimensions as you do.

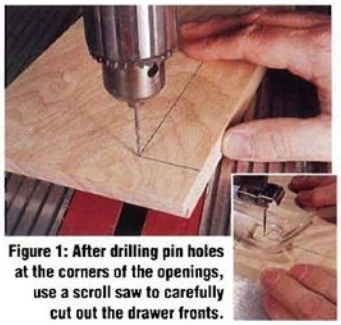

Figure 1: After drilling pin holes at the corners of the openings, use a scroll saw to carefully cut out the drawer fronts.

A Pair of Frames

The top and bottom of the box are simply a pair of picture frames, made from moldings which are rabbeted before assembly and then coved afterward.

Cut your stock an inch or two longer than the finished sizes of the frame sides and ends (pieces 4 and 5), then use the section view above to establish the rabbet on the edge of each piece. (The top and bottom panels of the jewelry box will be dropped into these rabbets from the outside, after the carcass is completed.) Mill the rabbets with a dado head, then miter the frame elements to their final lengths before gluing them together to create two identical frames.

After the glue dries, sand the frames to their final thickness. Uniformity is the key here - it's not too critical if they're a 64th off full dimension. With that done, you're ready to cut some coves.

Coving on the Table Saw

If you've never tried cutting coves on a table saw, I strongly recommend you practice on some scrap to get the feel of it. In the same way, use scraps to verify your saw setup will deliver the cove shown in the section view above.

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MATERIAL LIST

	T x W x L		T x W x L
1 Carcass Front & Back (2)	3/4" x 7" x 16"	**9** Drawer Stop (1)	5/8" x 1½" x 8⅞"
2 Carcass Sides (2)	3/4" x 7" x 10¼"	**10** Top (1)	1/4" x 7½" x 12½"
3 Drawer Fronts (2)	3/4" x 1½" x 8"	**11** Bottom (1)	1/4" x 7½" x 12½"
4 Frame Sides (4)	1" x 2" x 16"	**12** Top & Bottom Trim (1)	1/4" x 3/8" x 84"
5 Frame Ends (4)	1" x 2" x 11"	**13** Mirror (1)	1/8" x 5⅜" x 10½"
6 Long Drawer Supports (2)	1/4" x 1¼" x 14⅜"	**14** Mirror Tape (1)	Two-sided
7 Short Drawer Supports (2)	1/4" x 1¼" x 9⅜"	**15** Hinges (2)	Brass
8 Drawer Guides (2)	11/16" x 1½" x 14⁷⁄₁₆"	**16** Lid Support (1)	Brass

Another of the author's recent intarsia projects, featuring one of his favorite themes.

Clamp a long auxiliary fence to your saw's miter gauge and set the angle at 45°. Raise the blade to 3/4", then run the fence through the blade to establish a kerf.

Clamp the miter gauge in position to the point where the trailing teeth of the 10" blade (those farthest from the operator) are 1" away from the auxiliary fence. Now retard the blade so it only protrudes about 1/8" above the tabletop.

After testing your setup on scrap, run the frames across the blade face down (See **Figure 2**) and cut the cove in several passes: raise the blade about 1/8" on each pass, adjusting the location of the miter fence to match.

Figure 2: Make rabbeted frame moldings to create the top and bottom frames. Once they are mitered and glued up, you can form the cove on your table saw.

Sand the final cove smooth with 180 grit paper. Test fit the frames before gluing and clamping them to the carcass, as shown on the exploded view at left.

After the glue dries, cut the lid from the case, following the dimensions shown on the **Pinup Shop Drawings**. Remember these dimensions take the 1/8" saw kerf into consideration. Make the first cut, then insert some scrap wedges and use masking tape to keep them in place. Make the other three cuts in a similar fashion, wedging and taping as you go. Remove the saw marks by sanding or scraping the edges, checking to keep the matching edges flat as you go.

Working Up from the Bottom

Using 1/4" stock, make the long and short draw supports (pieces 6 and 7). Miter them to length, test their fit, and glue them in place onto the frame, inside your box.

The drawer guides (pieces 8) sit on top of the long drawer supports and are connected in the center by the drawer stop (piece 9), forming an "H". This is done with a simple dado joint formed on your table saw. Glue this subassembly to the supports.

I switched to Lake Superior maple for the top and bottom (pieces 10 and 11) and cocobolo for the trim that holds them in place (piece 12). Cut the top and bottom to size and glue them in place. Miter the trim to fit and secure it with glue, but wipe the cocobolo with acetone first to remove any oil residue. You'll attach the mirror with double stick tape (pieces 13 and 14) after the project is finished.

Pulls and Hinges

Before you create the rose on the lid, you can practice a little carving on the carcass. To preserve clean lines and avoid the clutter of protruding hardware, I made the edge of the lid into a handle by carving a small elliptical recess in the carcass (see **Pinup Shop Drawings**). This is another step where a little scrap wood will serve you well. Try cutting a few test ellipses before you take a sharp knife to the jewelry box itself.

The same principle is used to create pulls for the drawers, only this time you begin by carving an arc in the bottom frame (see **Pinup Shop Drawings**). This allows a finger to find its way under the drawer and into a small ellipse in the back edge of the drawer front, which becomes the pull. Follow the dimensions on the Pinup Shop Drawings when carving this ellipse, then sand all your carvings down to 280 grit.

Two jewelry hinges (pieces 15) hold the lid to the carcass. Locate these hinges according to the **Pinup Shop Drawings** and score the edges of their mortises with a sharp utility knife before chiseling them out. With the hinges set in place, dry fit the lid before screwing the brass lid support (piece 16) in place, following the manufacturer's instructions.

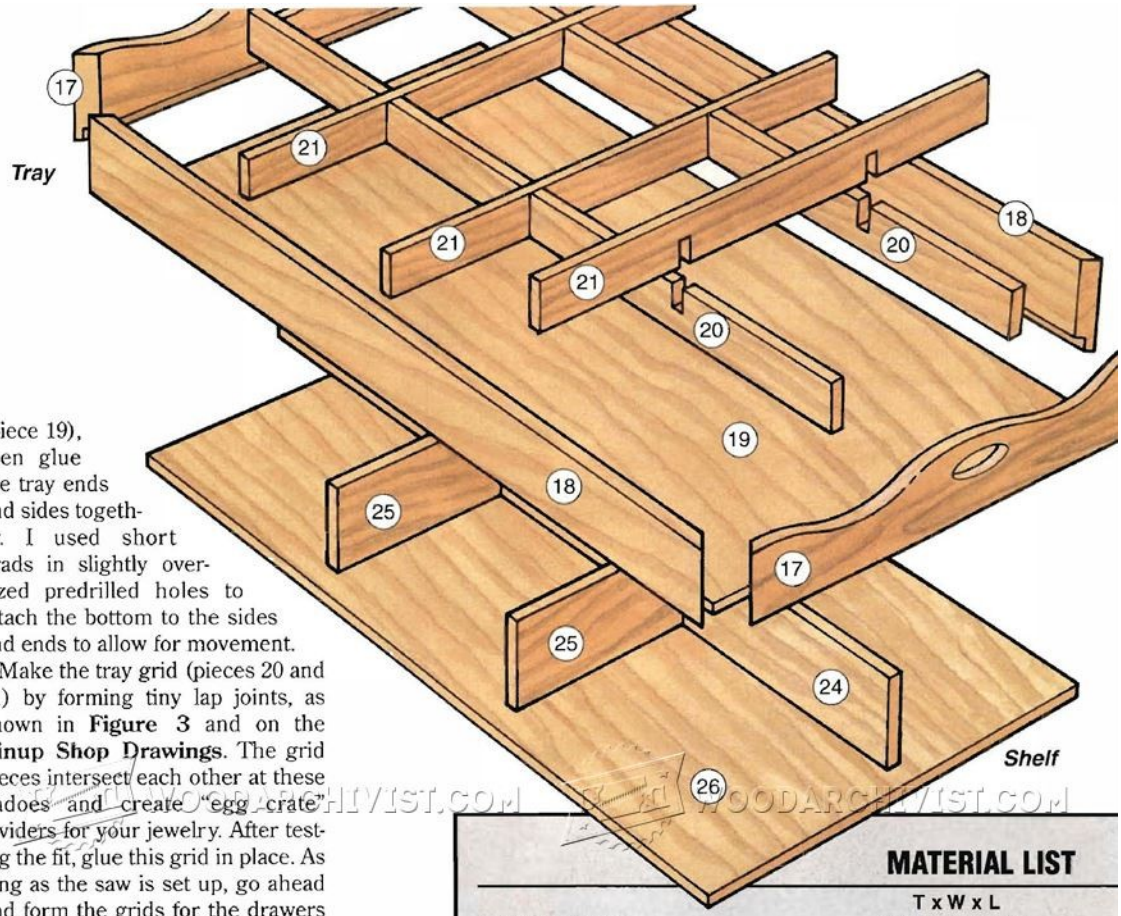
Building the Tray and Shelf

Inside the box, a tray with 12 compartments holds small items of jewelry like earrings, and a larger shelf below it holds more sizeable items. The tray compartments are formed by machining a lap-jointed grid system, versions of which also appear in the drawers and on the shelf. Cut the tray ends (pieces 17) to the shape found on the **Full-size Pattern**, miter the corners to the dimensions shown on the **Pinup Shop Drawings**. Use a dado head to rabbet the ends and sides (pieces 18) to accommodate the bottom

Jewelry Box Project Supplies

The following supplies are available from Woodworker's Journal.

Jewelry Hinge #62125 ..... $18.99
Brass Lid Support #27995 ..... $1.99



(piece 19), then glue the tray ends and sides together. I used short brads in slightly oversized predrilled holes to attach the bottom to the sides and ends to allow for movement.

Make the tray grid (pieces 20 and 21) by forming tiny lap joints, as shown in **Figure 3** and on the **Pinup Shop Drawings**. The grid pieces intersect each other at these dadoes and create "egg crate" dividers for your jewelry. After testing the fit, glue this grid in place. As long as the saw is set up, go ahead and form the grids for the drawers (pieces 22 and 23) and the shelf (pieces 24 and 25) and dry fit them in place. All the dimensions for these cuts are provided on the **Pinup Shop Drawings**.

Figure 3: Following the dimensions on the Pinup Shop Drawings, use your miter gauge to form the lap joints on the various grid pieces.

The shelf grid will be glued to the shelf (piece 26), which you should now cut and fit to size. Once the grid is glued in place, it will serve as a subtle handle for removing the shelf when access to the secret compartment below is required.

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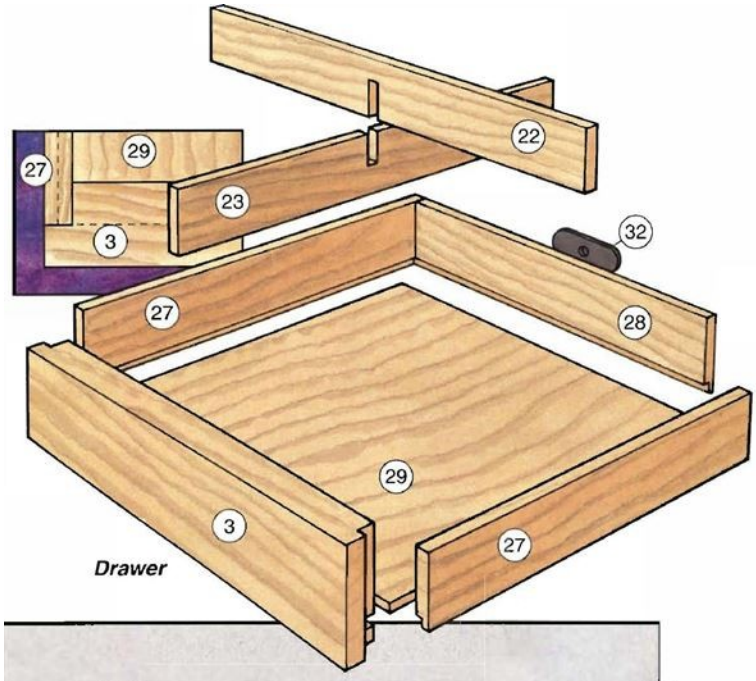
MATERIAL LIST

	T x W x L
17 Tray Ends (2)	1/4" x 1 9/16" x 9 3/8"
18 Tray Sides (2)	1/4" x 1 9/16" x 14 1/8"
19 Tray Bottom (1)	1/4" x 13 7/8" x 9 1/8"
20 Tray Grid Stiles (2)	1/4" x 3/4" x 13 3/16"
21 Tray Grid Rails (3)	1/4" x 3/4" x 8 7/8"
22 Drawer Grid Stiles (2)	1/4" x 3/4" x 7 7/16"
23 Drawer Grid Rails (2)	1/4" x 3/4" x 6 7/16"
24 Shelf Grid Stile (1)	1/4" x 1 3/4" x 14 3/8"

The Drawers

To allow the drawer fronts you made earlier to catch on the edge of the supports, the sides and back (pieces 27 and 28) aren't quite as wide as the fronts. The assembled drawers will ride between the guides (pieces 8) and on top of the the supports (pieces 6 and 7).

The rabbet joinery in the drawers is illustrated on the **Pinup Shop Drawings**. Follow the dimensions on that illustration to form both the rabbets in the sides and backs and the grooves on the inside of the fronts. Keep in mind the wrap-around grain pattern means each drawer front has its own top and bottom, and they can't be interchanged or flopped. (In other words, don't cut the groove along the wrong edge!) Because the drawer bottoms (pieces 29) are so small, I haven't experienced any problems gluing them into place along the bottom of the rabbets. But before you do that, dry fit the drawer components together to ensure they'll fit in the carcass openings. When everything fits right, glue up the drawers, checking for squareness and flatness as you go.



	T x W x L
25 Shelf Grid Rails (2)	1/4" x 1¾" x 9⁷⁄₁₆"
26 Shelf (1)	1/4" x 9⅜" x 14⅜"
27 Drawer Sides (4)	1/4" x 1⅜₁₆" x 7¼"
28 Drawer Backs (2)	1/4" x 1⅜₁₆" x 7⅜"
29 Drawer Bottoms (2)	1/4" x 7¾" x 7⅛"
30 Rose Intarsia Assembly (1)	See **Full-size Pattern**
31 Magnetic Tape (2)	1/8" x 1" x 2"
32 Strike Plates (2)	Steel

The Intarsia Rose

The rose (piece 30) is 1/2" thick. Following the **Full-size Pattern**, take your time and slowly cut all the pieces to rough shape on your scroll saw. Check my Techniques article (see page 22) for all the step by step information you'll need to complete the intarsia rose. Once it's all together, epoxy the rose to the box where you masked its gluing surface earlier.

To finish up, wax and buff the entire jewelry box (See **Figure 4**) before installing the mirror to the inside of the top with two-sided foam tape. Finally, apply short strips of magnetic tape (piece 31) to the drawer stop and then install strike plates (pieces 32) to the back of each drawer.

The project you've just completed is truly unique: it provides a surprisingly large amount of storage, brings joy to the craftsman, helps to spread the word about intarsia as an art form, and is guaranteed to evoke gratitude from the recipient.

Figure 4: After the entire box has been oiled and waxed, use a buffing compound and some elbow grease to work your way toward the perfect finish. The secret compartment is revealed by removing the shelf and sliding open the drawers, as shown at right.

Apply the Finish

Now you are ready to remove the hardware and sand the entire jewelry box completely through the grits until you get to at least 280 grit. Mask off an area on the top for epoxying your rose in place later. Apply several coats of clear Danish Oil to everything, then, once it's dry, buff the finish with a rouge or diamond buffing compound.